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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,402

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Michael Weilkes

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EXAMINER

MUSTAFA, IMRAN K

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,402	<b>Applicant(s)</b> WEILKES ET AL.	
	<b>Examiner</b> IMRAN MUSTAFA	<b>Art Unit</b> 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14, 19-22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winner (US 6,856,906) in view of Watanabe (US 5,910,786)

As to claim 14 Winner discloses a method for controlling a driver-assistance device, comprising:

evaluating measured quantities (Column 3 lines 34-59), to be recorded by sensor (Column 3 lines 34-59), for triggering a reaction (Abstract "In the event of the existence of preselected combinations of collision risks and injury risks, the deceleration devices of the vehicle are activated as a function of the degree of the collision risk");

determining measuring instants through repeating cycles for acquiring and evaluating the measured quantities (Column 3 lines 34-59), each of the repeating cycle having a cycle time  $t_z$  (Column 3 lines 34-59); and

determining whether a triggering criterion is reached (Abstract), and  
if so,

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sending a trigger to the driver-assistance device (Abstract),

Winner does not explicitly disclose of predicting a triggering instant, and determining whether one of the measuring instants situates immediately after the triggering instant, and if so, repeating the evaluating of the measured quantities, and if not adjusting the cycle time  $t_z$  for subsequent measuring instants so that one of the measuring instants follows immediately as possible an instant at which measured quantities giving rise to a triggering probably exist. Watanabe teaches this limitation (See at least Column 3 lines 1-25). According to KSR (G) some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. It would have been obvious to one skilled in the art to adjust the cycle time with the motivation of providing improved resolution when approaching a target vehicle.

As to claim 16 Winner discloses a method wherein the predicting is finished prior to when triggering start (See at least Abstract)

As to claim 19 Winner discloses that the reaction is an intervention into a guidance of a vehicle (Abstract, Column 4 lines 40-49).

As to claim 20 discloses of the reaction that includes a warning signal (Abstract, Column 4 lines 40-49).

As to claim 21 Winner discloses a method wherein the reaction includes an occupant restraint measure (Column 5 22-34)

As to claim 22 Winner discloses a system for controlling a driver-assistance device, comprising:

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an arrangement for evaluating the measured quantities (Column 3 lines 34-59), to be recorded by sensors (Column 3 lines 34-59), for triggering a reaction (Abstract);

an arrangement for determining measuring instants through repeating cycles for acquiring and evaluating the measured quantities (Column 3 lines 34-59) wherein each of the repeating cycles has a cycle time  $t_z$  (Column 3 lines 34-59); and

an arrangement for determining whether a triggering criterion is reached, and if so,

sending a trigger to the driver-assistance device (See at least Abstract)

Winner does not explicitly disclose of predicting a triggering instant, and determining whether one of the measuring instants situates immediately after the triggering instant, and if so, repeating the evaluating of the measured quantities, and if not adjusting the cycle time  $t_z$  for subsequent measuring instants so that one of the measuring instants follows immediately as possible an instant at which measured quantities giving rise to a triggering probably exist. Watanabe teaches this limitation (See at least Column 3 lines 1-25). According to KSR (G) some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. It would have been obvious to one skilled in the art to adjust the cycle time with the motivation of providing improved resolution when approaching a target vehicle.

As to claim 23 Watanabe teaches of a system wherein the cycle time  $t_z$  of the measuring instants is adjusted as a function of a prediction of an instant (Column3 lines 1-25).

As to claim 24 Winner discloses that the sensor is radar (Column 3 lines 34-39).

As to claim 25 Winner discloses that the sensor is a video sensor (Column 3 lines 34-39)

As to claim 26 Winner discloses that the sensor is a lidar sensor (Column 3 lines 34-39).

Claims 15, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winner (US 6,856,906) in view of Watanabe(US 5,910,786) in view of Janssen Jonas Lars (US 2003/0055563)

As to claim 15 Winner does not explicitly disclose of the measuring instants are controlled as a function of a prediction of an instant. Janssen Jonas Lars, however, teaches of measuring instants being controlled as a function of prediction of instant (Paragraph15). It would have been obvious to combine Janssen Jonas Lars prediction of an instant with Janssen with the motivation of being able to better detect an object.

As to claim 27 Winner discloses a system wherein at least one of the sensors includes a radar sensor (Column3 lines 34-39). Winner does not explicitly disclose of the measuring instants are controlled as a function of a prediction of an instant. Jansson Jonas Lars, however, teaches of measuring instants being controlled as a function of prediction of instant (Paragraph15). It would have been obvious to combine

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Jansson Jonas Lars prediction of an instant with Janssen with the motivation of being able to better detect an object.

Claims 17, 18, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winner (US 6,856,906) in view of Watanabe(US 5,910,786) in view of Massen (US 2003/0168271)

As to claim 17 Winner discloses of a program for measuring the instants being controlled (Column 3 lines 34-53). Winner does not explicitly disclose of altering the run length of the program. . Massen however teaches of adjusting the cycle time  $t_z$  of the measuring instants wherein (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

As to claim 18 Winner does not explicitly disclose of altering the run length via a number of refresh cycles. Massen however teaches of adjusting the cycle time (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

As to claim 30 the claim is interpreted and rejected as in claim 29.

As to claim 31 Winner discloses a method wherein:

the sensor signals are preprocessed to be available in an evaluable form as measurement data for later evaluation (Column 3 lines 34-53),

the measurement data are transferred to a plurality of program for evaluating the measurement data(Column 3 lines 34-53), each of the programs requiring a processing

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duration, and the processing durations add up to once cycle time(Column 3 lines 34-53),

following the evaluation, if a triggering criterion is reached, a specific reaction is triggered, and the measuring cycle is repeated, and if the triggering reaction is not reached(Column 4 lines 18-51), a prediction of triggering instants is subsequently performed(Column 4 lines 18-51),

Winner does not explicitly disclose of altering the cycle time. Massen however teaches of adjusting the cycle time (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

Claims 28, 29, 32, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winner (US 6,856,906) in view of Watanabe(US 5,910,786)in view of Janssen Jonas Lars (US 2003/0055563) and in further view of Massen (US 2003/0168271)

As to claim 28 Janssen does not disclose of the measuring instants are controlled as a function of a prediction of an instant. Jansson Jonas Lars, however, teaches of measuring instants being controlled as a function of prediction of instant (Paragraph15). It would have been obvious to combine Jansson Jonas Lars prediction of an instant with Janssen with the motivation of being able to better detect an object.

Winner does not explicitly disclose that a faster algorithm is used for predicting the instant than for triggering the reaction. It would have been obvious to one skilled in the art to use a faster algorithm to predict the instant with the motivation of being able to accurately sense the data of the surrounding environment.



Winner does not explicitly disclose of altering the cycle time. Massen however teaches of adjusting the cycle time (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

As to claim 29 Winner discloses that the reaction is an intervention into a guidance of a vehicle (Column 4 lines 70-49).

Winner does not teach of altering the run length via a number of refresh cycles. Massen however teaches of altering the run length via a number of refresh cycles (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

As to claim 32 Winner discloses a method wherein  
the measuring instants are controlled as a function of a prediction of the instant (Column 3 lines 34-53),

Winner does not explicitly disclose of adjusting a phase position of the measuring instant based on an estimation of a most probable scenario. Winner also does not explicitly disclose of altering the phase position by lengthening or shortening the cycle time. Winner does not explicitly disclose of altering the cycle time. Massen however teaches of adjusting the cycle time and the phase position (Paragraph 8). It would have been obvious to alter the cycle time and adjust the phase position with the motivation of providing an enhancing the detection of objects.

Winner also does not explicitly disclose that a faster algorithm is used for predicting the instant than for triggering the reaction. It would have been obvious to one

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skilled in the art to use a faster algorithm to predict the instant with the motivation of being able to accurately sense the data of the surrounding environment.

As to claim 33 Winner discloses a method wherein at least one of the following is satisfied:

the reaction is an intervention into guidance of the vehicle (Column 4 lines 40-49); the reaction includes a warning signal; and the reaction includes an occupant restraint measure (Column 4 lines 40-49), and

wherein the sensors include at least one of a radar sensor, a video sensor, and a lidar sensor (Column 3 lines 34-39).

Winner does not explicitly disclose of altering the cycle time. Massen however teaches of adjusting the cycle time (Paragraph 8). It would have been obvious to alter the cycle time with the motivation of providing an enhancing the detection of objects.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 14-33 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IMRAN MUSTAFA whose telephone number is (571)270-1471. The examiner can normally be reached on Mon-Fri 7:30AM-5:00PM, Alt Fri, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/3/2009

/Jack W. Keith/  
Supervisory Patent Examiner, Art Unit 3663